Customer: ROXBURGH ELECTRONICS LIMITED

No. SSV96-0305

Date: Jan. 29. 1996

Attention:

Your ref. No:

Your Part. No: 22 6073

SPECIFICATIONS

ALPS':

MODEL RS4511110K

F.E.C. No: 698-015

Sample No. : G0444714M

RECEIPT STATUS

RECEIVED

By. Date

Signature

Name

Title

ALPS ELECTRIC CO., LTD.

HEAD OFFICE
1-7, YUKIGAYA-OHTSUKA-CHO,
OHTA-KU, TOKYO 145 JAPAN

DSG'D Y. Saitoh

APP'D M. Umemori

ENG. DEPT. DIVISION

Sales

No. SSV96-0305

SPECIFICATIONS

1. THIS SPECIFICATIONS APPLY TO RS4511114 POTENTIOMETERS.

2. CONTENTS OF THIS SPECIFICATIONS.

   4S4518-3c1M , 4S0008-45M
   4S0001-200, 4S0001-201
   S4518G402A

3. MARKING

   ·MARKING ON ALL UNITS
   DATE CODE, RESIST. VALUE, TAPER, TRADE MARK

   Marking ➡ in specifications shows standard and condition for application

CLASS NO. | TITLE: STANDARD TYPE POTENTIOMETER (SLIDE)

ELECTRICAL

1. Overall resistance :
   Overall resistance tolerances : ±20 %

Unit : KΩ

5	10	20	50	100	200	250	500	1,000

2. Minimum resistance :

Unit : Ω

Overall resistance (KΩ)	5,10	20,50	100	200, 250	500	1000
Across term.1-2 / Across term.2-3	30 / 50	50 / 70	100 / 120	200 / 220	300 / 320	500 / 500

3. Taper : "A" (SAS16)

4. Rated power : 0.125 Watts.

5. Rated voltage : Rated voltage = $\sqrt{P \cdot R}$ (V)
   P : rated power (W)
   R : nominal overall resistance (Ω)

   When the rated voltage exceeds the maximum operating voltage the maximum operating voltage shall be the rated voltage.
   Maximum operating voltage : A.C. 150 V , D.C. 10 V

6. Dielectric test : Units shall be designed to withstand 300 volts A.C. 50 Hz R.M.S. between resistance elements and case for a period of one minute without damage or arcing.

7. Insulation resistance : Greater than 100 megohms between resistance elements and case when tested by a 250 volts D.C. insulation resistance meter.

8. Sliding lifetest : 15,000 cycles

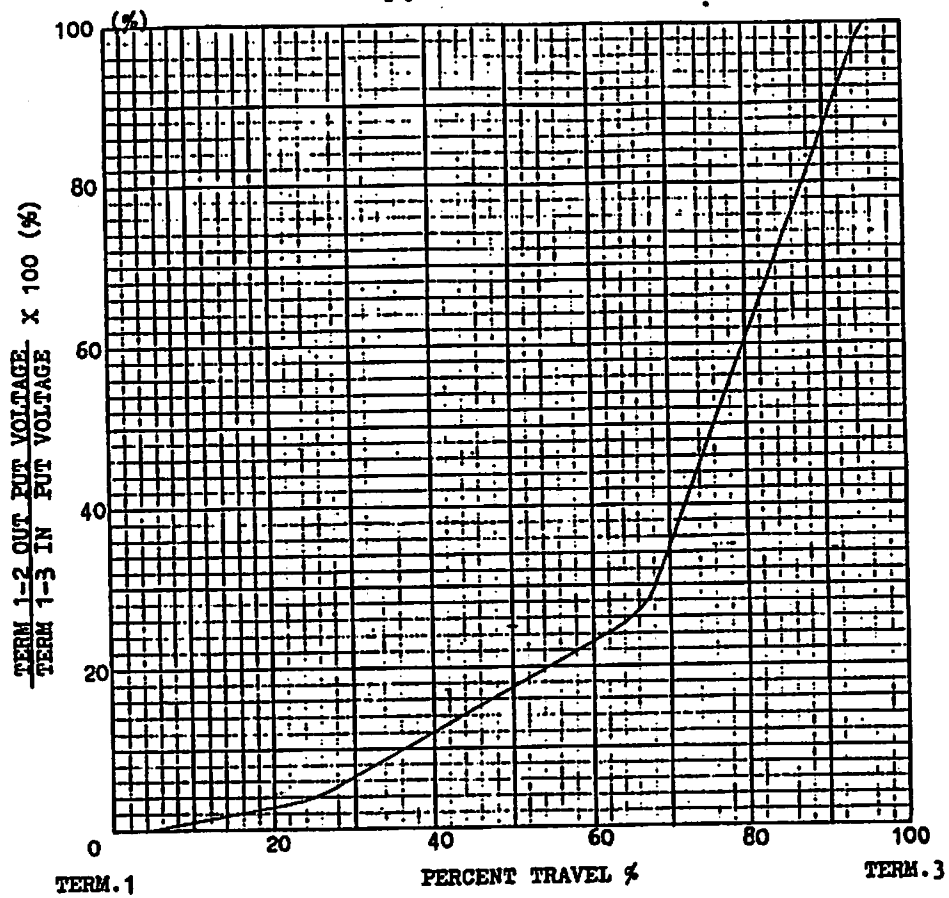
* Lever shall be operable with speed of 20 mm per sec.without noise by static electricity.

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SYMB	DATE	APPD.	CHKD.	DSGD.	APPD.	CHKD.	DSGD.	TITLE
					Aug. 29 '81 H. Sato		May 16 '81 N. Ito	SPECIFICATIONS
								DOCUMENT NO. 4S4518-301M

USED ON	NAME
45, 60 mm TRAVEL TYPE	RESISTANCE TAPER
ALPS ELECTRIC CO., LTD. 1-7 YUKIGAYA OTSUKA-CHO OTA-KU TOKYO JAPAN	TITLE SPECIFICATIONS

TAPERED CURVE: "A"



NOTES:

PERCENT VOLTAGE CHECK POINT	TOLERANCE
50% TRAVEL FROM TERM.1	10-25 %

SYMB	DATE	APPD.	CHKD.	DSGD.	APPD.	CHKD.	DSGD.	NAME
					Aug. 28 '81 M. Inoue		Aug. 28 '81	RESISTANCE TAPER
								DWG.NO. SAS 16

O R

CLASS.NO. | TITLE STANDARD TYPE POTENTIOMETER (SLIDE)

MECHANICAL

1. Travel : Specified in particular Figure.
2. Operating force : 30 – 250 gf (Note 1)
3. Starting force : Operating force + 100 gf max. (Note 1)

   (Note 1) Measuring temperature : 5°C – 35°C

   Measuring point :

   ➡ :5 mm from lever end (Lever length > 6 mm)

   :1 mm from lever end (Lever length ≤ 6 mm)

   Sliding speed : 20 mm per sec.

4. Stop strength :

   ➡ 5 kgf at a position 5 mm from mounting surface. (Lever length > 6 mm)

   5 kgf at a position 2 mm from mounting surface. (Lever length ≤ 6 mm)

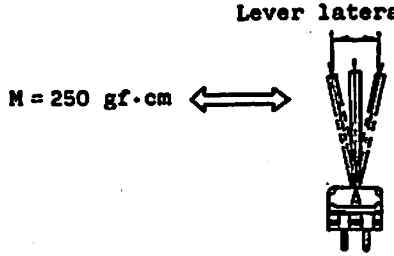
5. Lever lateral play :

   When an alternating bending moment of 250 gf·cm is applied perpendicular to the direction of lever travel, the bothside movement of the lever shall be less than 2 (2 × L / 20) mm

   L: Lever length on the measurement point from mtg. surface.

   (Note 2) Exempt warping of insulated lever.

Lever lateral play



{ L ≤ 5 mm The bothside movement of the lever shall be less than 1.2 mm }

6. Lever strength :

   (1) To be resistant with 5 kgf static force of pull or push applied to lever in thrust direction for 10 seconds without damage.

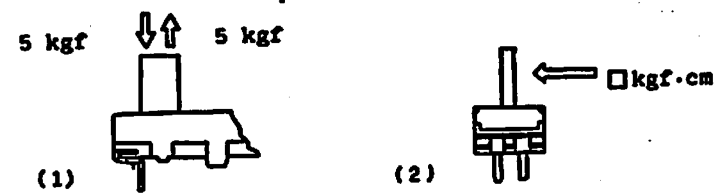
CLASS.NO. | TITLE STANDARD TYPE POTENTIOMETER (SLIDE)

   (2) To be resistant with following static force applied to lever in vertical direction to lever driving for 10 seconds without damage.

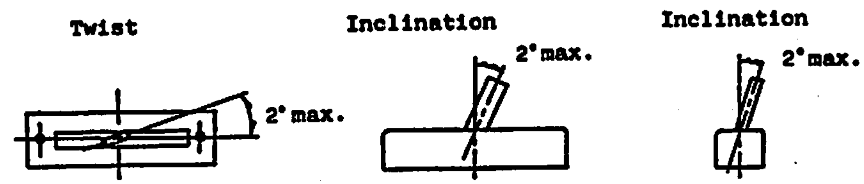
   ① 2 kgf·cm over : in case of pot., mounted to chassis with screws.

   ② 0.5 kgf·cm over : in case of pot., mounted to P.C.B. only with terminals.

   ③ 2 kgf·cm over : in case of pot., mounted to P.C.B. with both terminals and mounting plate.



7. Lever inclination and twist :

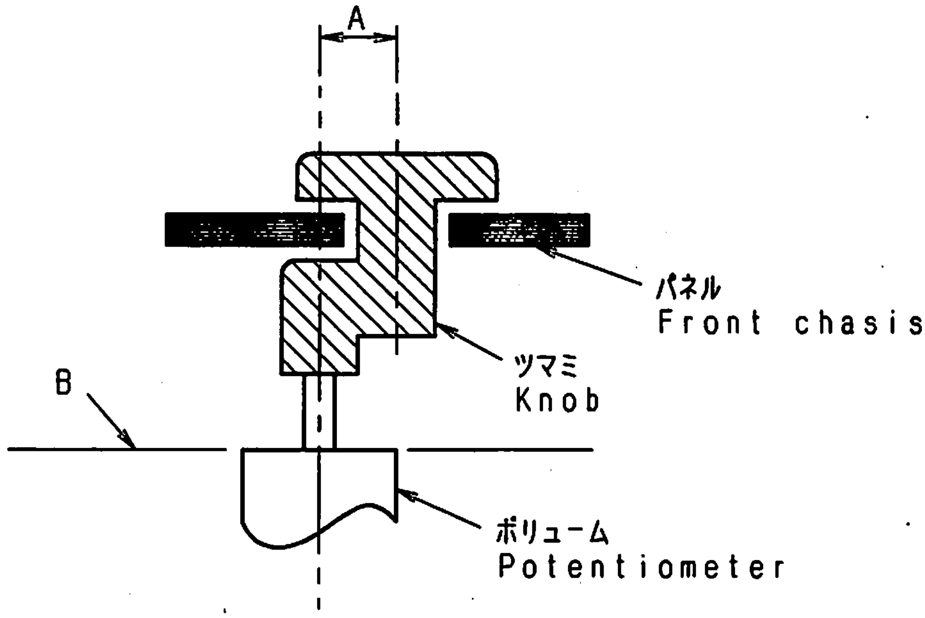


8. Resistance to soldering heat : 3 sec. max. at 300°C

ご使用上の注意
PRECAUTION IN USE

1. 偏心ツマミをご使用になる場合
   レバ゛ーの中心より離れたところを作用点としてご使用になる場合、可能な限り下図A寸法を短くしてご使用下さい。
   If it will be used the operating point away from the center line of the lever, it should be shorter as possible.

2. レバ゛ー長さについて
   レバ゛ー長さについては、ツマミを含めて、下図B面より極力短いものをご使用願います。レバ゛ー長さについては、作用点までの距離が短いほどしゅう動感触が良好となり、長いほど好ましくない感触になります。
   About the length of lever
   If conditions permit, it is advisable to use the shortest possible lever.
   The longer the length up to operating point, the more unfavorable slide feeling will be given.



3. レバ゛ーの駆動に関しては上記内容を考慮の上、セット実装を行いあらかじめ異常のないことをご確認願います。
   Regarding the operation of the lever, please consider the above mentioned , and make sure nothing is wrong with the operation under installing in your appliance that you plan to use our products actually.

4. ツマミ挿入及びレバ゛ー操作は、ボ゛リュームマウント基板にソリ（曲がり）のない状態で行って下さい。
   Knob assembly on the lever and functioning the lever to be performed under the condition of P. C. B. without worp.

ORIGINAL	'91-7-3	Y·Y	K·N	S·A
SYMB	DATE	APPD	CHKD	DSGD

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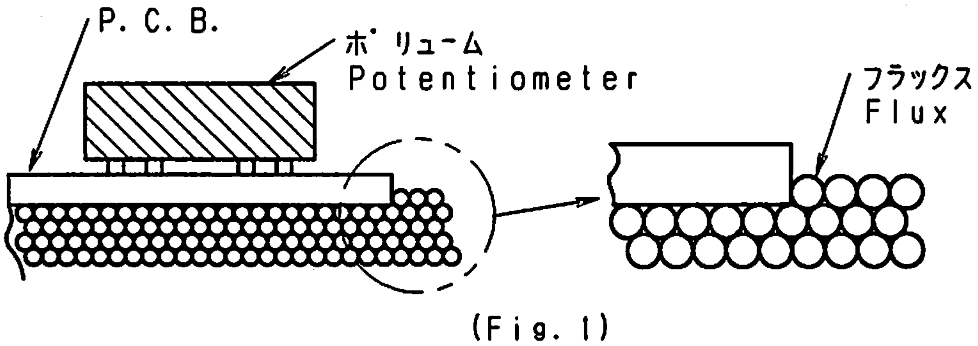
APPD.	CHKD.	DSGD.	TITLE
PDI-ENGI '95. 7. 24 YOSIOKA	PDI-ENGI '95. 7. 24 KIMURA	PDI-ENGI '95. 7. 24 Y. SAITOH	スライト゛ボ゛リューム 仕様書 SPECIFICATIONS
			DOCUMENT NO. 4S0001-200

G0444714M

はんだ付け条件
FOLLOEW THE NEXT CONDITIONS FOR SOLDERING

1. はんだ SOLDER
   JIS Z 3282に規定の63% Snはんだを使用
   63% Sn solder specified in JIS Z 3282.
2. 使用基板 BOARD IN USE
   両面スルーホール基板又は、片面銅張積層板　板厚 t=1.6mm
   Double-faces through-hole board or Single-face copper laid laminate board.
   Plate thickness (t)=1.6mm
3. 自動はんだ<DIP条件>
   (1) レバー位置　センター付近に設定願います。
   (2) フラックス比重　0.83±0.01（発泡式）
   (3) フラックス高さ　プリント基板の板厚の半分の位置にフラックスの上面が接するレベル（図1）
   又、ボリューム挿入面への流れ込みのないこと。（フラックス上がり、飛散に注意）
   (4) プリヒート温度 100°C max. 時間1分以内.（プリント基板のボリューム挿入側の温度）
   (5) はんだ温度　260°C max. 時間5秒以内.　はんだ回数は1回までとする。

   IN THE CASE OF DIP SOLDERING
   (1) State of potentiometer
   Position a lever in the vicinity of center.
   (2) Specific Gravity of Flux
   0.83±0.01 (foaming type)
   (3) Height of Flux face
   A level of the upper face of flux for reaching the position at a half of the plate thickness of printed board. (Fig. 1)
   Further, no flow of flux invading on the surface of printed board on the side of installing potentiometer is allowed.
   (4) Preheat condition
   100°C max., within 1 minute
   (Temperature on the side of installing printed board is designated.)
   (5) Soldering condition
   Solder temperature: 260°C max.
   Soldering period : within 5 seconds
   Time of soldering : only one time is permitted



(Fig. 1)

4. 手はんだ IN THE CASE OF MANUAL SOLDERING
   はんだ温度　300°Cmax.　時間3秒以内 はんだ回数は1回までとする。
   Solder temperature : 300°C max.
   Soldering period : within 3 seconds
   Time of soldering : only one time is permitted

ORIGINAL	'91-9-3	Y·Y	S·A	S·S
SYMB	DATE	APPD	CHKD	DSGD

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APPD.	CHKD.	DSGD.	TITLE	スライドボリューム 仕様書 SPECIFICATIONS 1/2
PDI-ENGI '95. 7. 24 YOSIOKA	PDI-ENGI '95. 7. 24 KIMURA	PDI-ENGI '95. 7. 24 Y. SAITOH	DOCUMENT NO.	4S0001-201

G0444714M

5. 注意事項

(1) はんだ付けの際に、端子にストレスを加えないで下さい。例えば、端子に熱を加えたまま製品を動かしますと、かしめガタ及び電気的特性が劣化する恐れがあります。

(2) 両面スルーホール基板を使用する場合は、ボリューム挿入側の端子取付穴に、はんだランドがないようにご配慮願います。ボリューム挿入側での配線が必要な場合は端子取付穴からの直接取り出しを避けスルーホール配線用の穴を設けるなどのご配慮をお願いします。

(3) ボリューム挿入側へのはんだ上がりは、はんだ熱による端子接触不良の発生原因となりますので（図2）を参照願います。

(4) リード配線の場合、ボリューム本体と、はんだ付け部の距離を1mm以上開けてはんだ付け願います。（図3）

(5) はんだ付けによるボリュームへの影響は、プリント基板の大きさ、ボリュームの取付け位置、はんだ槽の大きさ、等により異なりますのであらかじめ実使用状態で実施し、異常のないことを確認の上、はんだ付けして下さい。

MATTERS TO BE NOTED

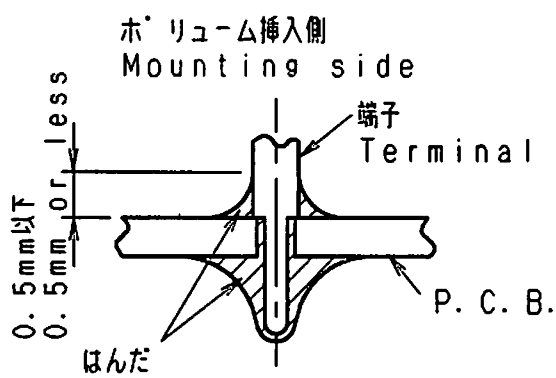
(1) Do not add any stress on terminals in the case of soldering. For instance, forced movement of potentiometer with terminals being heated may probably deteriorate the electric features due to generation of looseness in connection between resistant board and terminals.

(2) Avoid use of double-faces through-hole board as much as possible. If it is necessary to use it. Do not apply through-hole plating to a hole in which a potentiometer is inserted, and install a land to which terminals are soldered only on a face opposite to the face on the side of installing potentiometer.

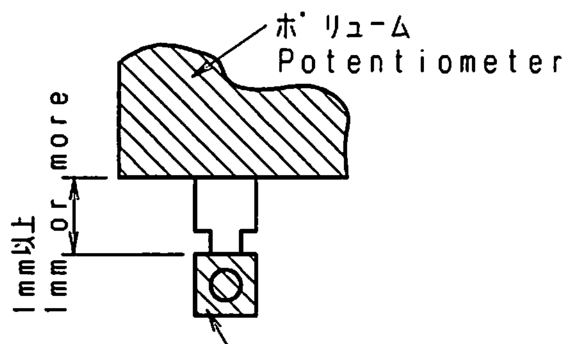
(3) Use caution to soldering process so as to prevent solder from rising up to the surface of printed board on the side of installing potentiometer, because defective contact may take place in terminal connecting part due to soldering heat . (Fig. 2)

(4) In the case of lead wiring, solder it so that a gap of 1 mm or more may be reserved between the potentiometer body and soldering part. (Fig. 3)

(5) The grade of influence of soldering exerted on the potentiometer depends upon the size of a printed board, installing position of the potentiometer, and the size of a solder bath etc. Therefore, make sure, in advance, of no abnomal state under the conditions of soldering to be carried our at present.



(Fig. 2)



(Fig. 3)

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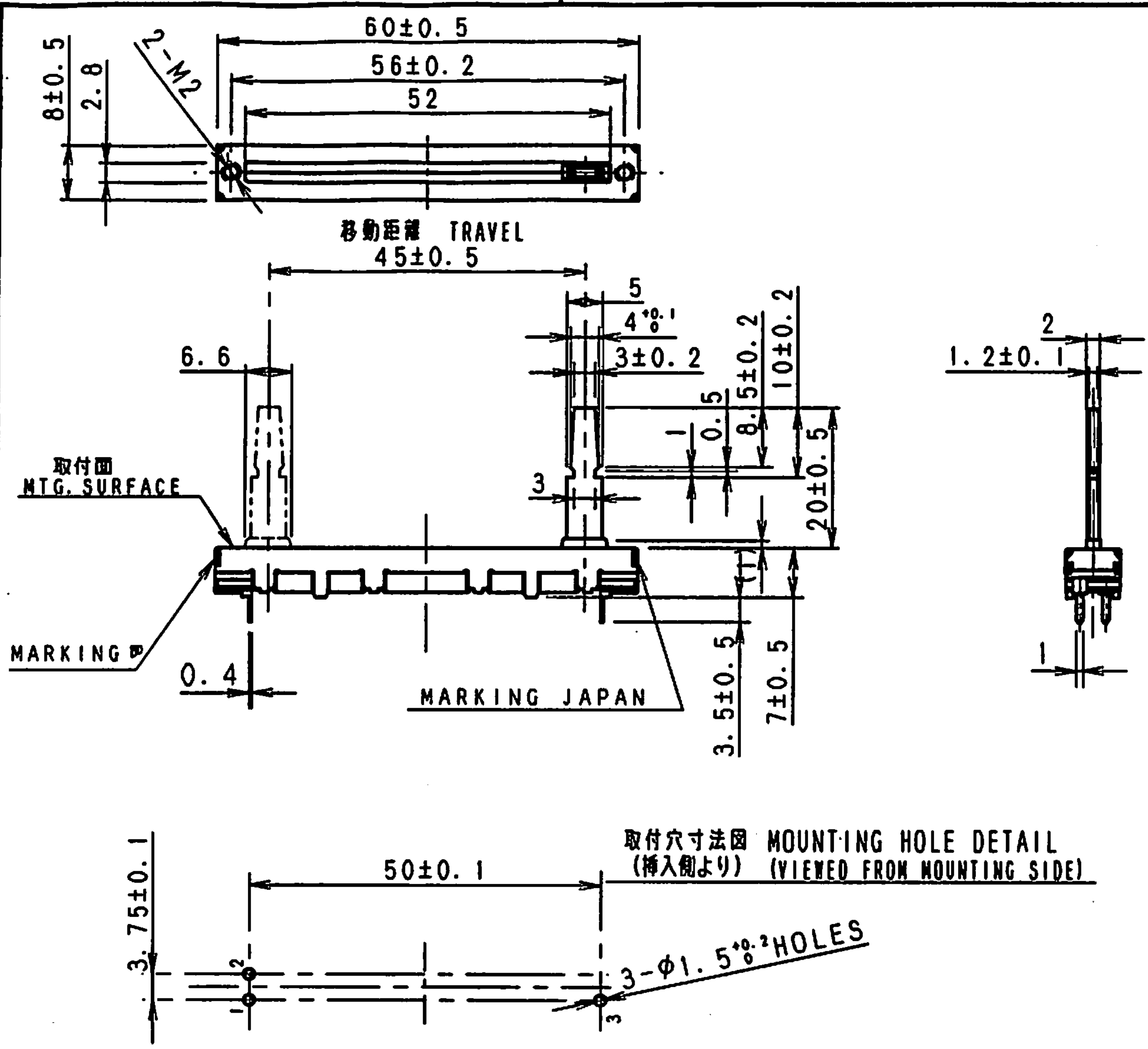
ORIGINAL	'91-9-3	Y・Y	S・A	S・S
SYMB	DATE	APPD	CHKD	DSGD

APPD.	CHKD.	DSGD.
PDI-ENGI '95. 7. 24 YOSIOKA	PDI-ENGI '95. 7. 24 KIMURA	PDI-ENGI '95. 7. 24 Y. SAITOH

TITLE スライドボリューム 仕様書 SPECIFICATIONS 2/2

DOCUMENT NO. 4S0001-201

G0444714M



NOTES
1. MOUNTING SCREW THREAD LENGTH IS CHASSIS THICKNESS +2mmMAX.
取付用ネジの首下長さは，シャーシ板厚　+２ｍｍ以下とする。
2. TOP SIDE OF KNOB SHALL BE MOUNTED TO LEVER WITHIN 30mm LENGTH FROM LEVER MTG. SURFACE.
取付面からツマミ先端まで　３０ｍｍ以内でご使用願います。

指定なき部分の許容差 TOLERANCES UNLESS OTHERWISE SPEC	
L≦10	±0.3
10＜L＜100	±0.5
100≦L	±0.8
角度 ANGULAR DIMENSION	±5°

PART NO.	NAME	MATERIAL NAME / CODE	FINISH
—	—	—	—

ALPS ELECTRIC CO., LTD.

DSGD. セッケイ K. SATOU '93-06-16	SCALE 1:1	G0444714M S4518G402A
CHKD. S. ABE '93-06-16		TITLE SLIDE POTENTIOMETER SINGLE UNIT
APPD. Y. YOSHIOKA '93-06-16	UNIT mm	DOCUMENT NO. —

SYMB	DATE	APPD	CHKD	DSGD